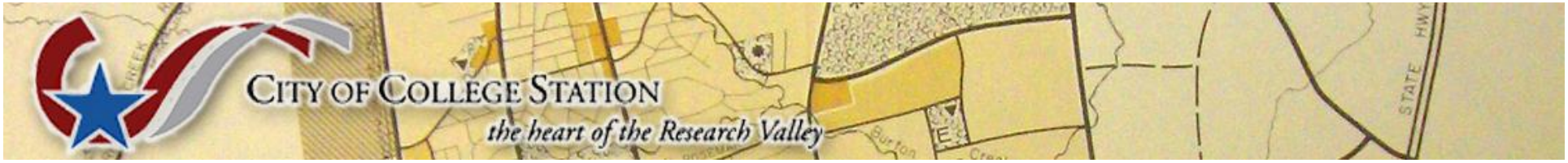


Eastside Mobility Study for The City of College Station, Texas

Initial Study Advisory Committee Meeting February 27, 2006

Kimley-Horn and Associates, Inc.

Agenda

- Role of the Advisory Committee
- Study Purpose and Scope of Services
- Workshop 1
  - Goals and Objectives
- Means of Meeting Goals and Objectives
- Existing Conditions
- Best Practices and Resources
- Workshop 2
  - Thoroughfare Alternatives
- Next steps
  - Work Plan
  - Public Meeting

Role of the Advisory Committee

- Provide input to the project Consultant and City staff to refine study assumptions
- Identify transportation issues and concerns within the study area
- Review and comment on study findings and recommendations

Study Purpose

- Evaluate the existing College Station thoroughfare plan based on the implementation of the currently adopted land use plan

- Identify deficiencies in the thoroughfare plan and make specific recommendations related to the thoroughfare plan that will ensure the future mobility needs of east College Station

Scope of Services

1. Data Collection
2. Initial Advisory Committee Meeting
3. Initial Public Meeting
4. Develop Existing (2006) and Build Out Demographic Assumptions
5. Develop and Calibrate Existing Model
6. Develop Build-Out Network Using Three Scenarios
7. Evaluate Master Thoroughfare Plan
8. Implementation Strategy
9. Final Advisory Committee Meeting
10. Final Public Meeting
11. Draft Report
12. Policy Meeting(s)
13. Final Report

Workshop 1 – Goals and Objectives

Generally, the community wants:

- Traffic calming
- Slower speeds
- Landscaping and urban design elements
- Medians and cross walks

A typical agency wants:

- Consistent design standards
- Good levels of service
- Wide streets
- Faster speeds

Finally what do the developers or land owners want:

- Make a profit
- Sell their product, usually by building quality
- More parking
- More flexibility

Goals and Objectives

Typical objectives of a thoroughfare plan include:

- To provide for the orderly development of an adequate major street system as land development occurs;
- To reduce the cost of major street improvements to the public through the coordination of the street system with private action;
- To enable private interests to plan their actions, improvements, and development with full knowledge of public intent;
- To minimize disruption and displacement of people and businesses through long range advance planning for major street improvements;
- To increase travel safety;
- To provide opportunities for bicycles and pedestrians to safely share the right-of-way.

- Break

Thoroughfare planning objectives can be achieved through both:

- (1) improving the operational efficiency of thoroughfares; and
- (2) improving the system efficiency through system coordination and layout.

Operational Efficiency

Operational ways to improve street capacity include:

(1) Control of access - A roadway with complete access control can often carry three times the traffic handled by a non-controlled access street with identical lane width and number.

(2) Parking removal - Increases capacity by providing additional street width for traffic flow and reducing friction to flow caused by parking and unparking vehicles.

(3) One-way operation - The capacity of a street can sometimes be increased 20-50%, depending upon turning movements and overall street width, by initiating one-way traffic operations. One-way streets can also improve traffic flow by decreasing potential traffic conflicts and simplifying traffic signal coordination.

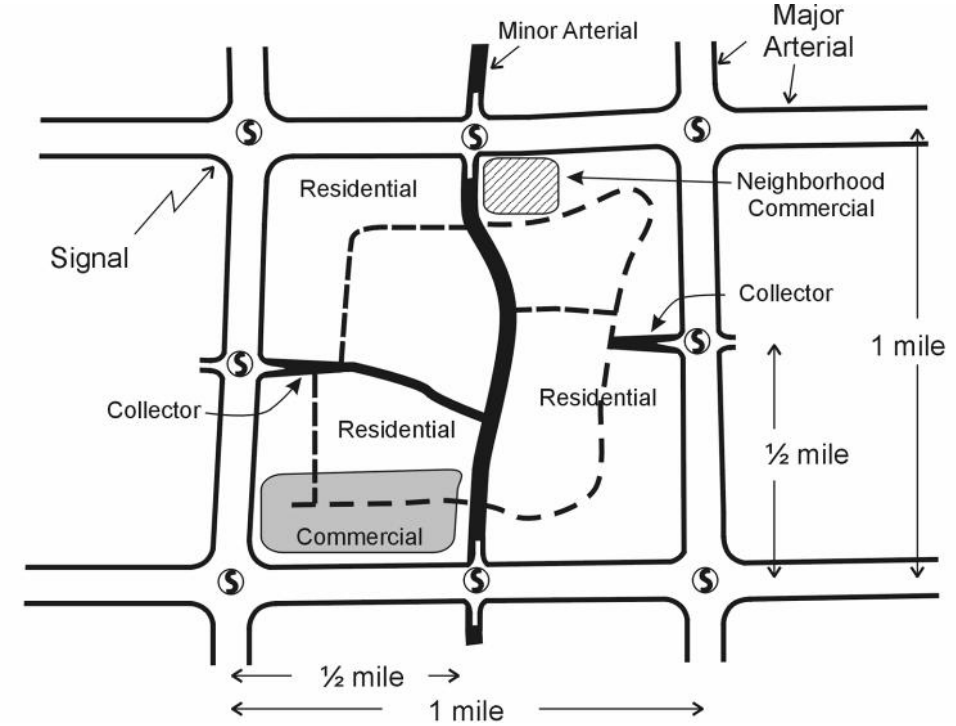
(4) Reversible lanes - Reversible traffic lanes may be used to increase street capacity in situations where heavy directional flows occur during peak periods.

(5) Signal phasing and coordination - Uncoordinated signals and poor signal phasing restrict traffic flow by creating excessive stop-and-go operation.

System Efficiency

Another means for altering travel demand is the development of a more efficient system of streets that will better serve travel desires. A more efficient system can reduce travel distances, time, and cost.

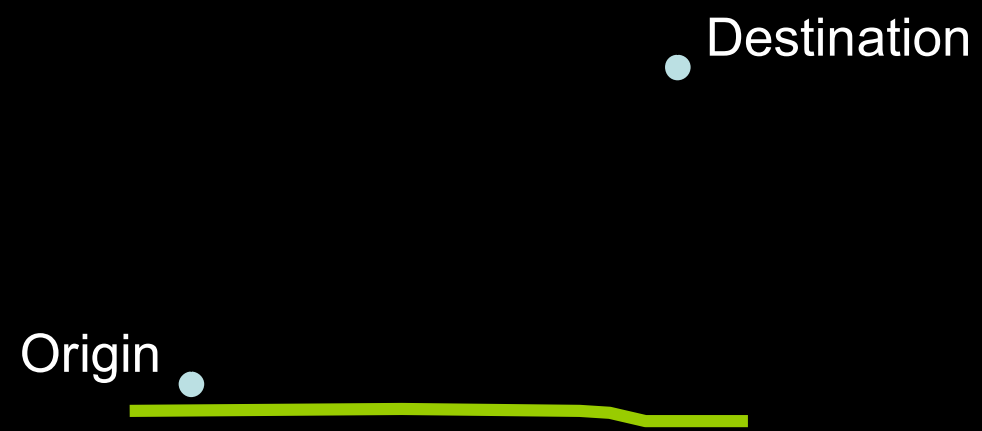
Improvements in system efficiency can be achieved through the concept of functional classification of streets and development of a coordinated major street system.



The Power of Connected Streets

How do we get from here to there?

The Power of Connected Streets



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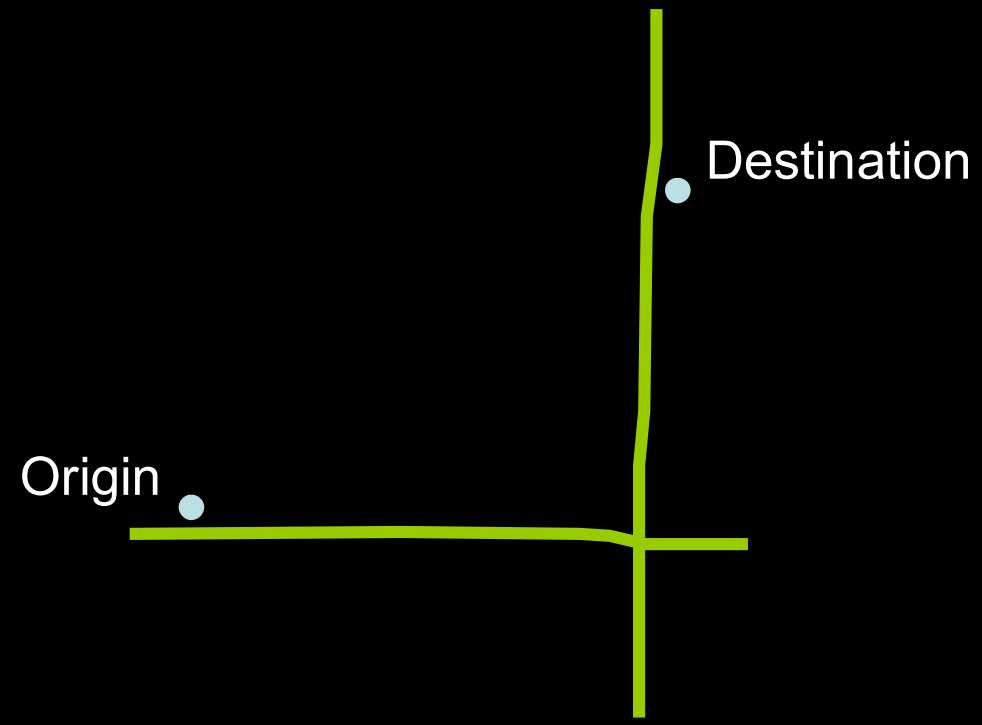
The Power of Connected Streets



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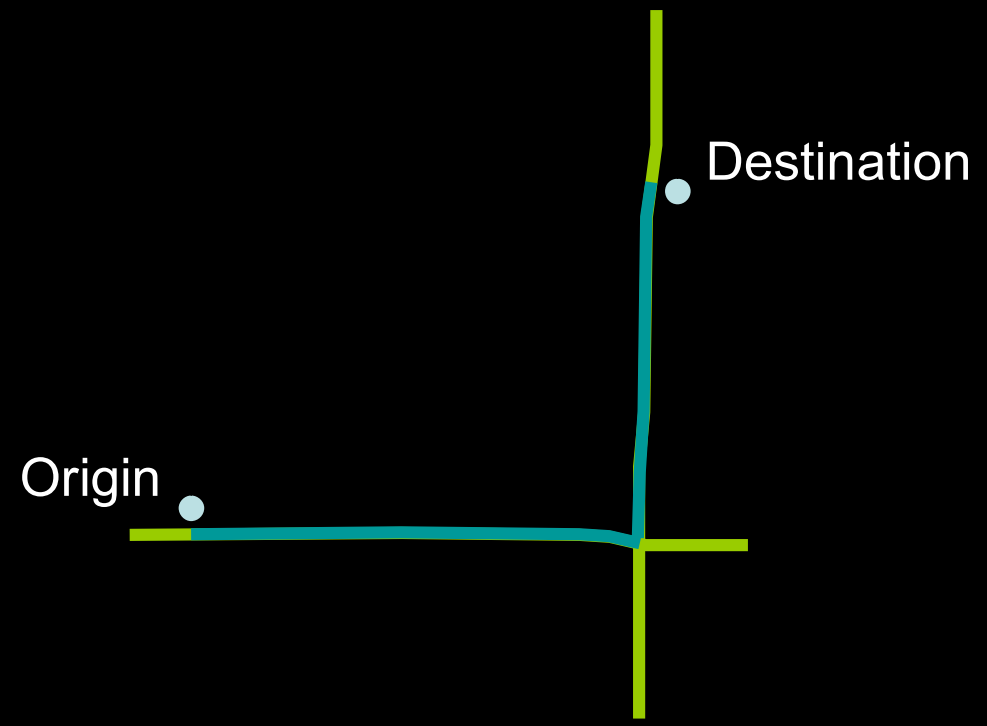
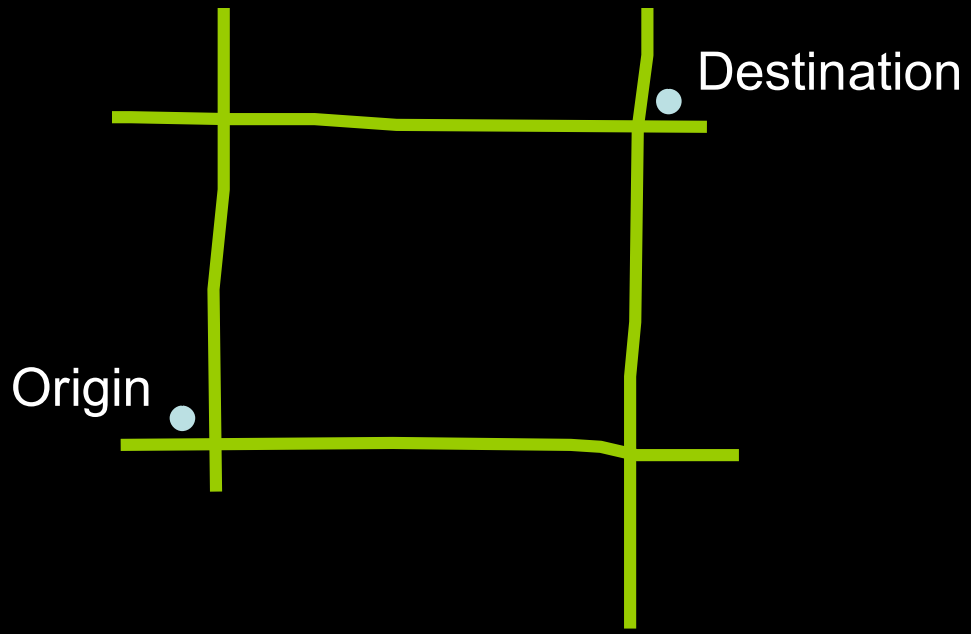
The Power of Connected Streets



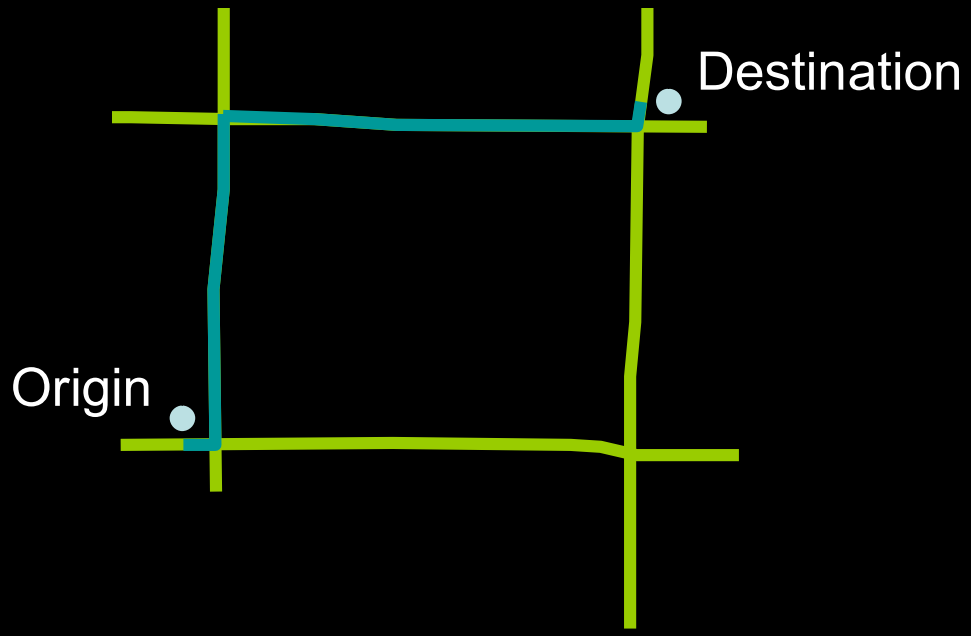
1 Possible Route

The Power of Connected Streets



Add a second pair of streets to the network, and…

The Power of Connected Streets

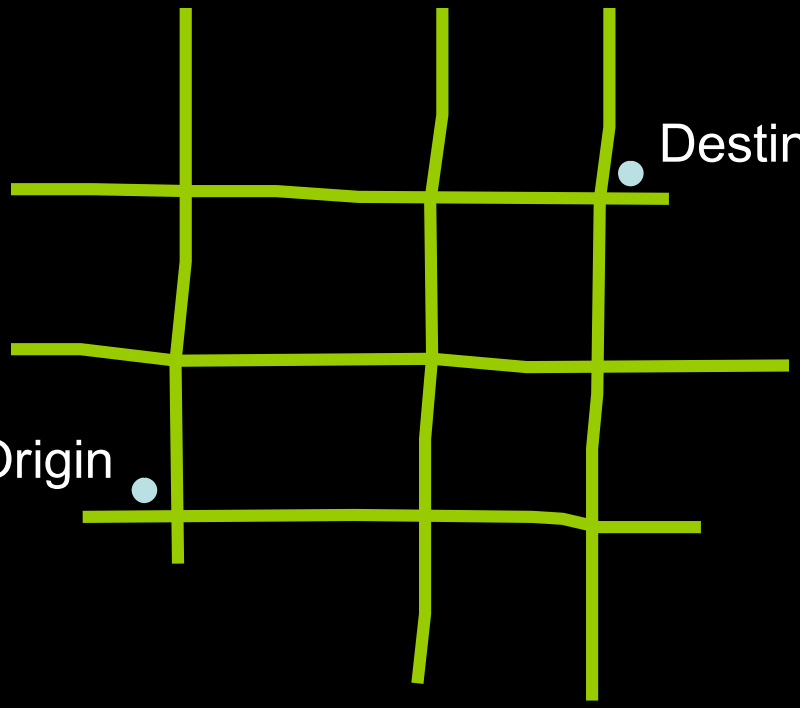


2 Possible Routes

The Power of Connected Streets

x= 2

y= 2

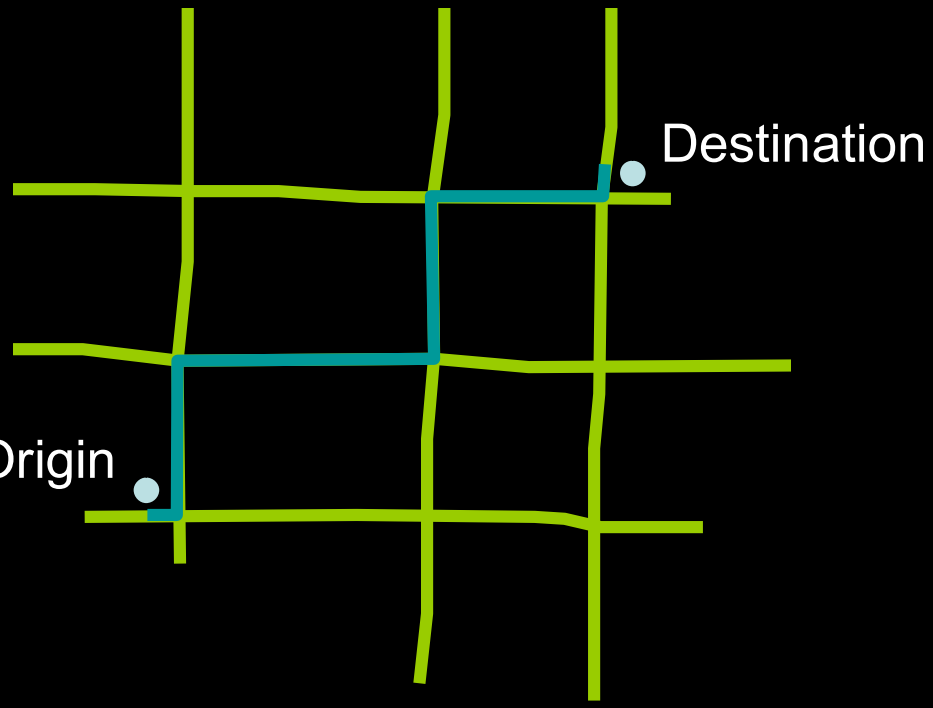


Add another street in each direction…

The Power of Connected Streets

x= 2

y= 2

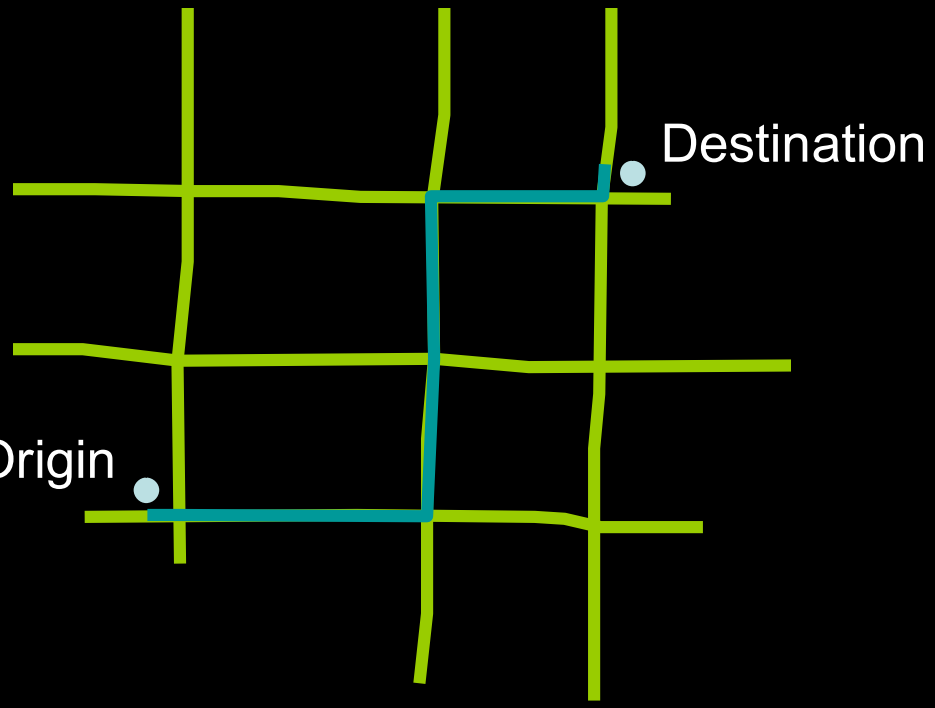


More Possible Routes

The Power of Connected Streets

x= 2

y= 2

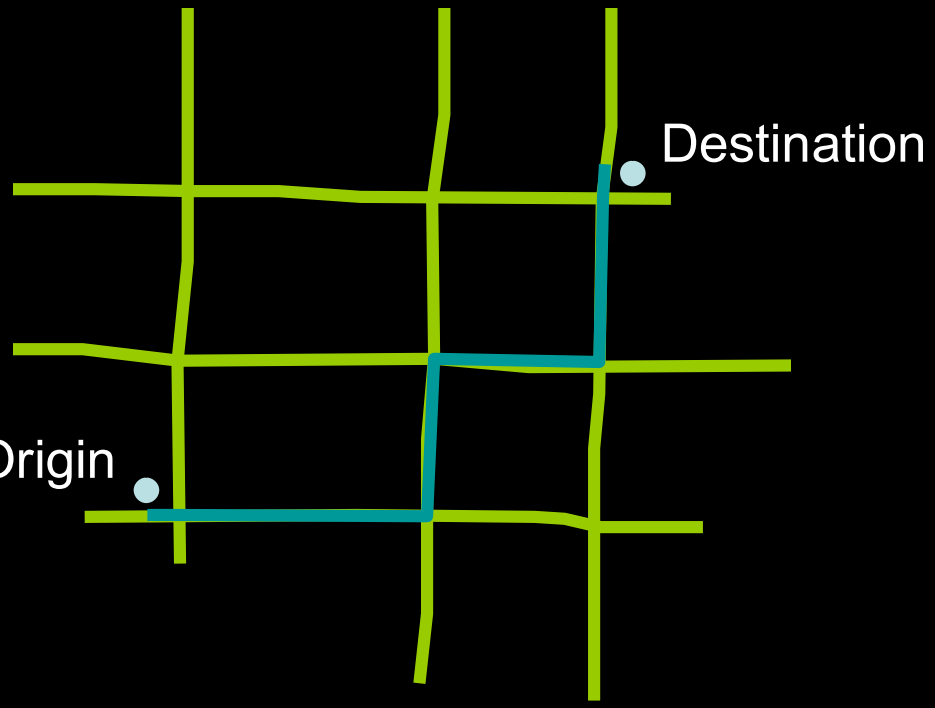


More Possible Routes

The Power of Connected Streets

x= 2

y= 2

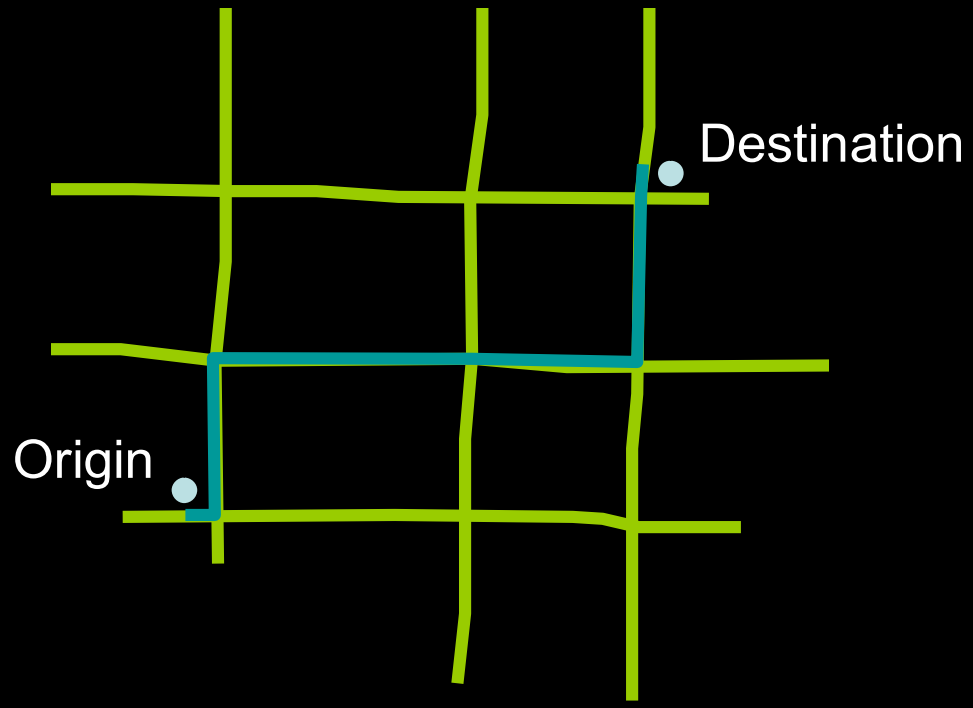


More Possible Routes

The Power of Connected Streets

x= 2

y= 2



More Possible Routes: 6 in all, without doubling back

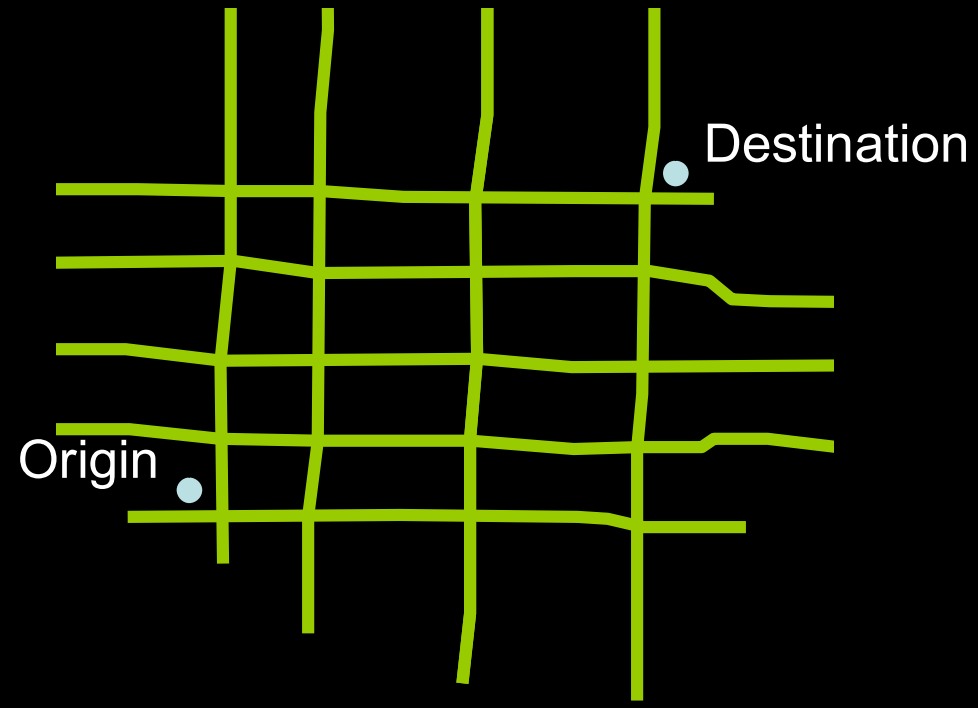
The Power of Connected Streets

$$\frac{(x+y)!}{(x!)(y!)} = \text{\# of possible routes}$$

The Power of Connected Streets

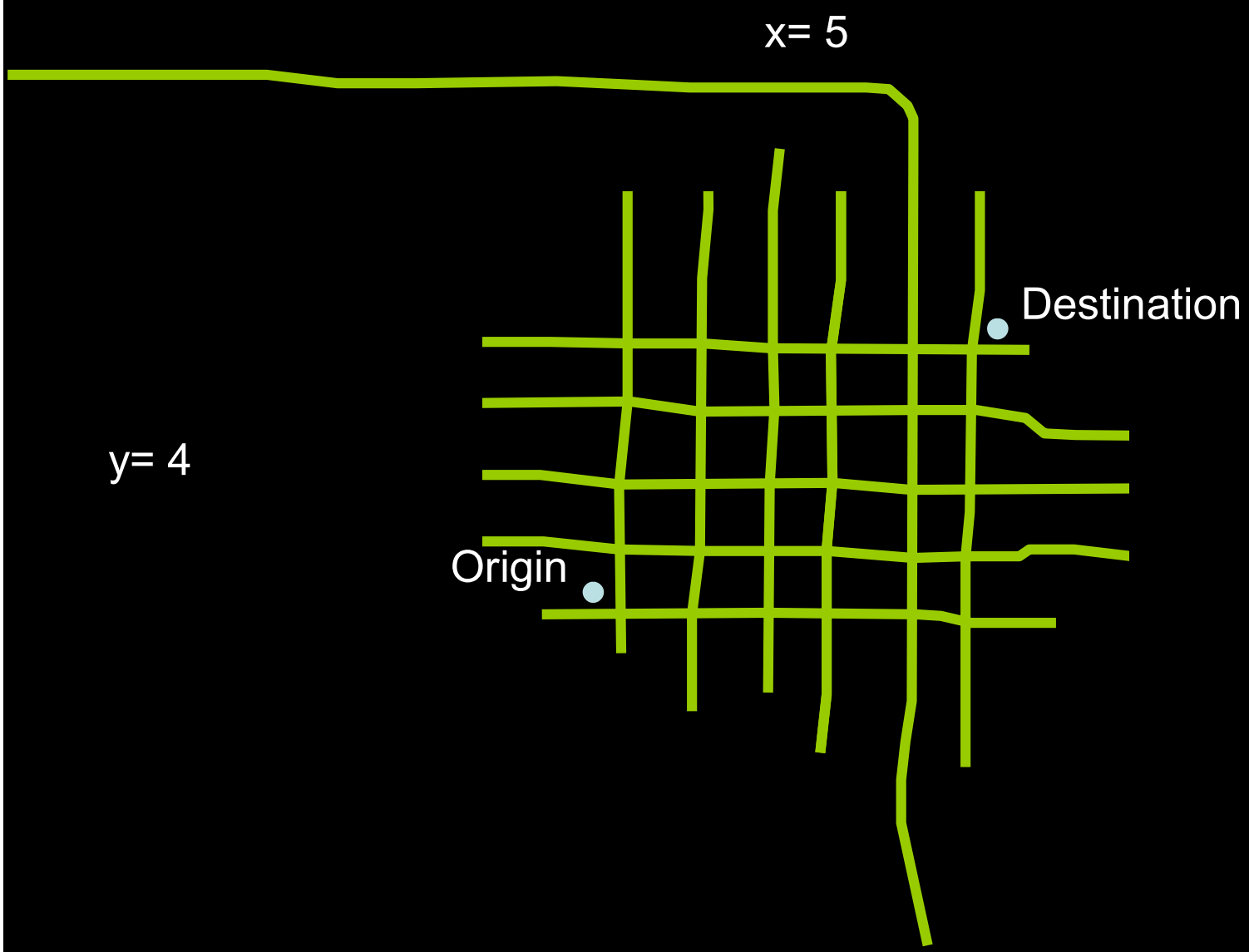
x= 3

y= 4



Continue enhancing the network: 4 x 3 grid yields 35 routes

The Power of Connected Streets



Continue enhancing the network: 5 x 4 grid yields 126 routes

The Power of Connected Streets

Make a town, not “pods.” 8 x 8 grid yields 12,870 routes

The Power of Connected Streets

Best Practices and Resources

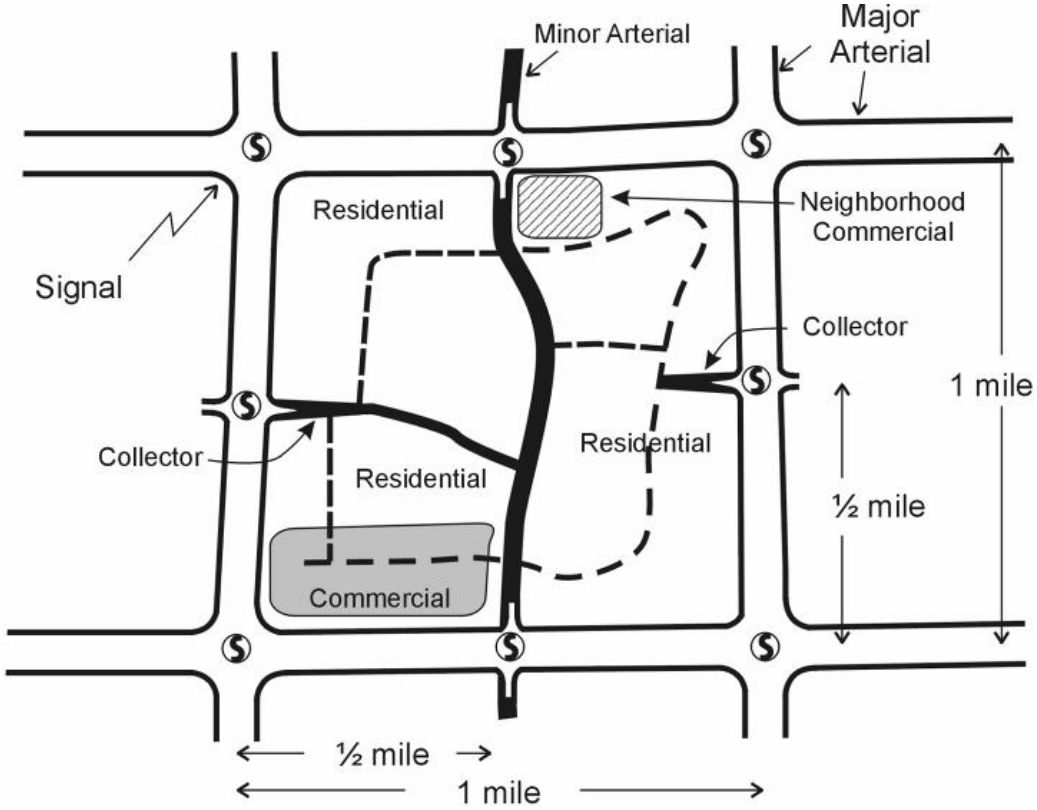
- Thoroughfare Planning
- Context Sensitive Design
- Access Management

Thoroughfare Planning Theories

- Conventional Thoroughfares
- Connected Thoroughfares
- Context Sensitive Design Thoroughfares
- Smart or New Urbanism Thoroughfares
- Rural By Design Thoroughfares
- Safe Thoroughfares
- Active Thoroughfares

Conventional Thoroughfare Planning

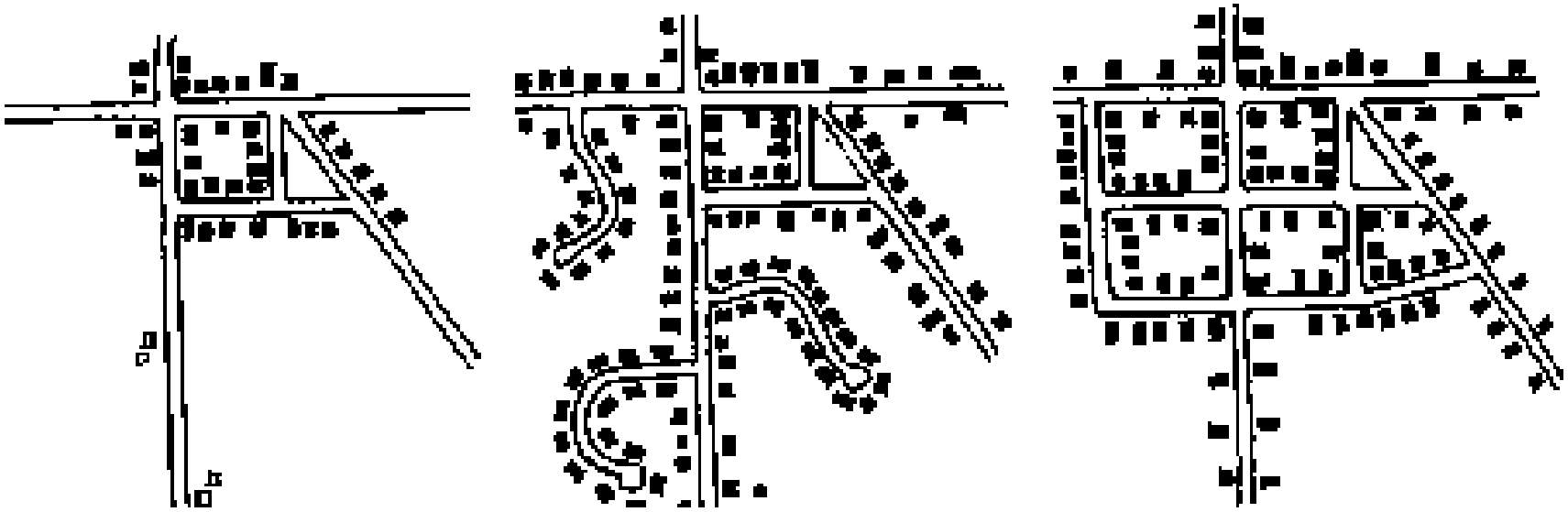
- Uses ASHTO functional classification System.
- Typically plans for a grid network of six lane arterials crossed by freeways.



Connected Thoroughfares

- Encourage average intersection spacing for local street to be 300-400 feet.
- Limits maximum spacing between pedestrian/bicycle connections to about 350 feet.
- Reduces street pavement widths to 24-36 feet.
- Limits or discourages cul-de-sacs (for example, to 20% of streets).
- Limits the maximum length of cul-de-sacs to 200 or 400 feet.

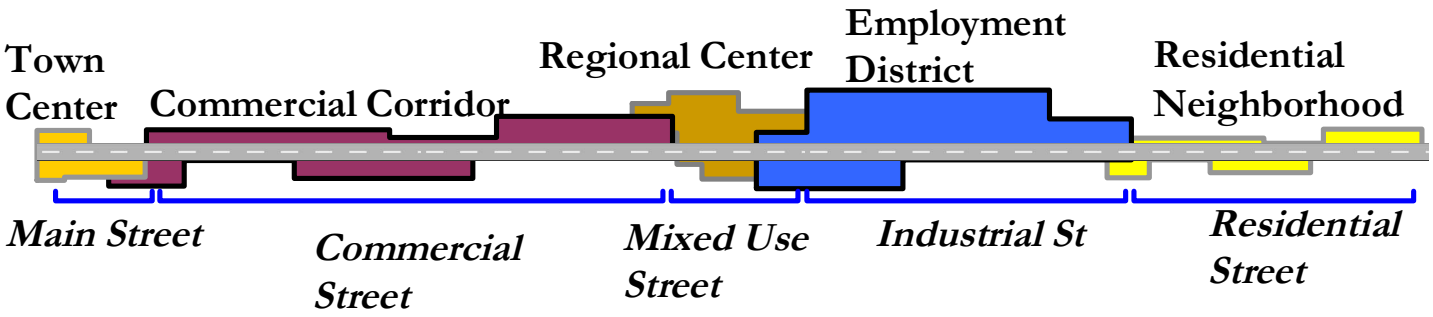
Connected Thoroughfares



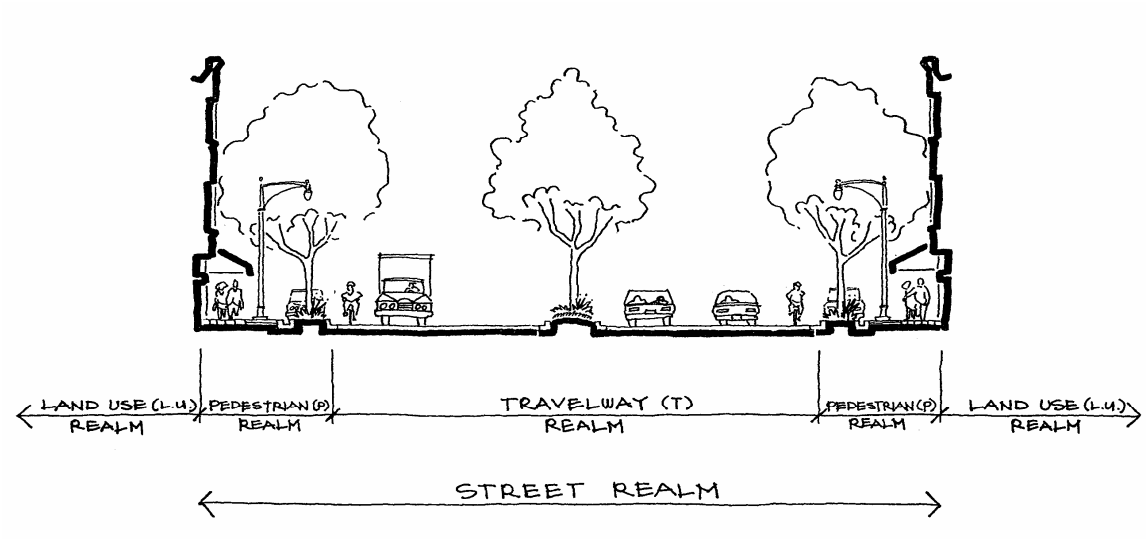
- Limits or discourages gated communities and other restricted access roads.
- Requires a minimum connectivity index, or rewards developments that have a high connectivity index with various incentives.
- Creates a planning process to connect street “stubs,” that is, streets that are initially cul-de-sacs but can be connected when adjacent parcels are developed in the future.

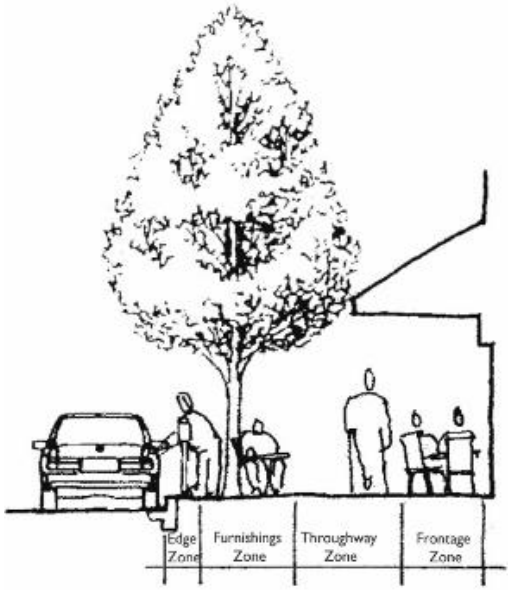
Context Sensitive Design

"One Size Does Not Fit All"



Accounts for all the "realms"



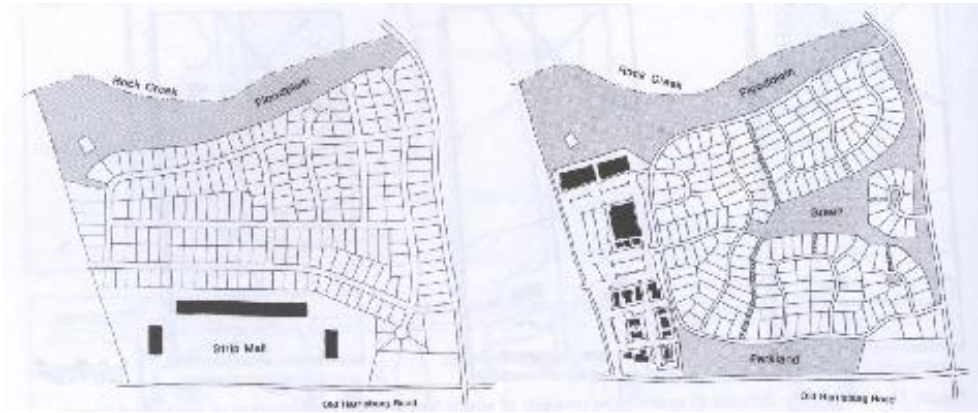


Smart or New Urbanism Thoroughfares

- Principles of Connected Streets
- Extreme, no dead-end streets
- Encourages equal use of the R-O-W for all modes, thus reduce the separation of street realms.
- One of the challenges of New Urbanism design is to allow the diffuse flow of traffic without creating "short-cuts" that encourage cut-through traffic.

CITY OF COLLEGE STATION
the heart of the Research Valley

Smart or New Urbanism Thoroughfares



Eastside Transportation Study

Kimley-Horn and Associates, Inc.

Conventional

- 30-35 mph speeds comfortable
- Bare, stark, uninviting
- Survivable, but not fun

New Urbanist

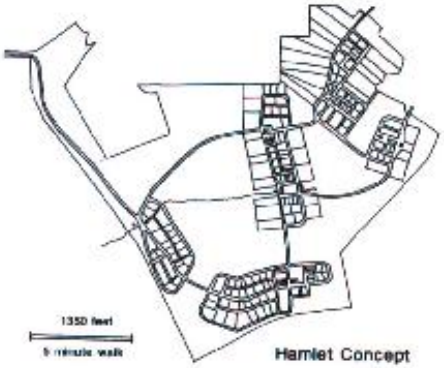
- 20-25 mph speeds comfortable
- Green, sustainable, inviting
- Pleasant for walking, bicycling and driving

Rural By Design Thoroughfares

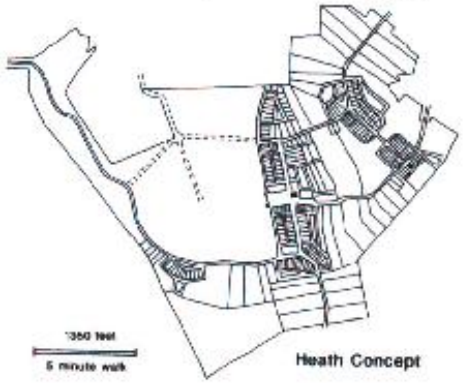
- Stresses clustering land uses to protect greenspace
- Streets should address natural restraints (topography, rivers, and other features)
- Streets should enhance views and architectural focal points
- Uses public open spaces in front of buildings

Rural By Design Thoroughfares

Existing R-2 Zoning



Hamlet Concept



Heath Concept

Safe Thoroughfares

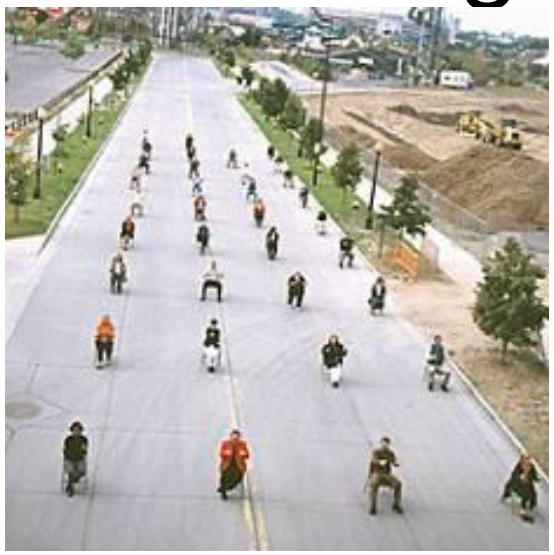
- Street planning should relate to overall community planning, including pedestrian and bicycle activity
- Traffic in residential areas should be kept to a minimum to reduce noise, congestion, and hazards to pedestrians
- The street is an important component of overall residential community design. Properly scaled and designed streets can create more attractive communities and can contribute to a clearly defined sense of place

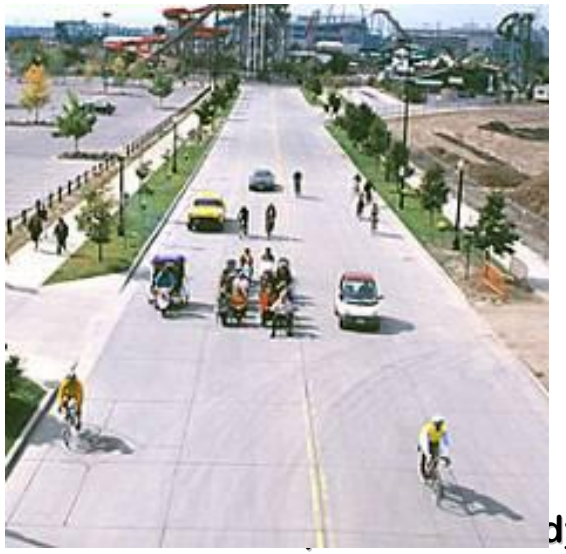
Active Thoroughfares

- Data from the 1995 Nationwide Personal Transportation Survey revealed that automobiles accounted for 89.3 percent of all trips, whereas walking and bicycle trips accounted for only 6.4 percent.
- These data are important because transportation and city planning researchers have suggested that a meaningful shift in auto trips to walking and bicycling could take place if community design adequately supported these behaviors.
- This assumption is reasonable because while nearly 25 percent of all trips are less than one mile, approximately 75 percent of these trips are made by automobile.
- Changing trip-making behavior to include more non-motorized trips would translate into a favorable public health outcome.


24 HOUR
FITNESS

Active Thoroughfares





What is the most efficient way to move 35 people?

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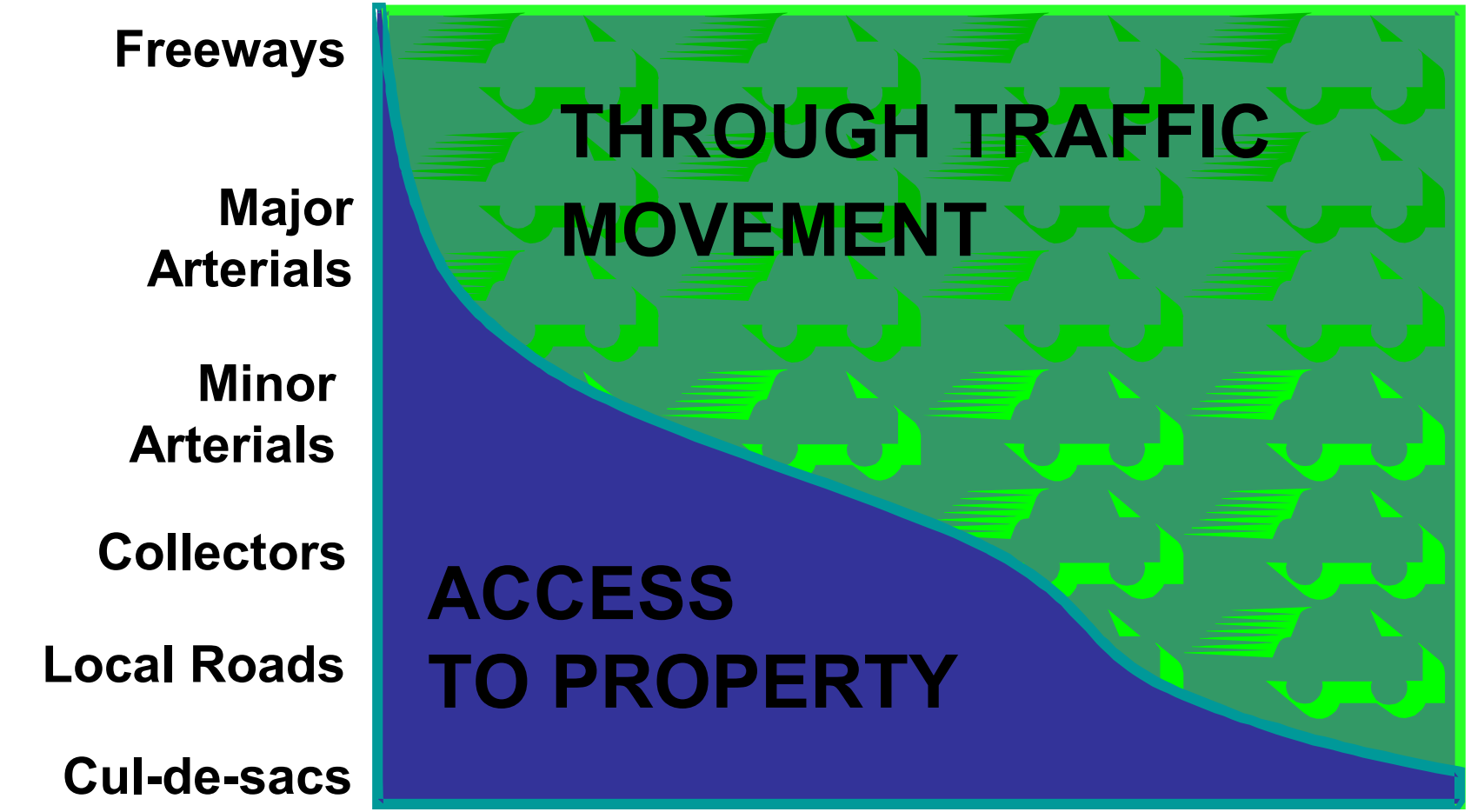
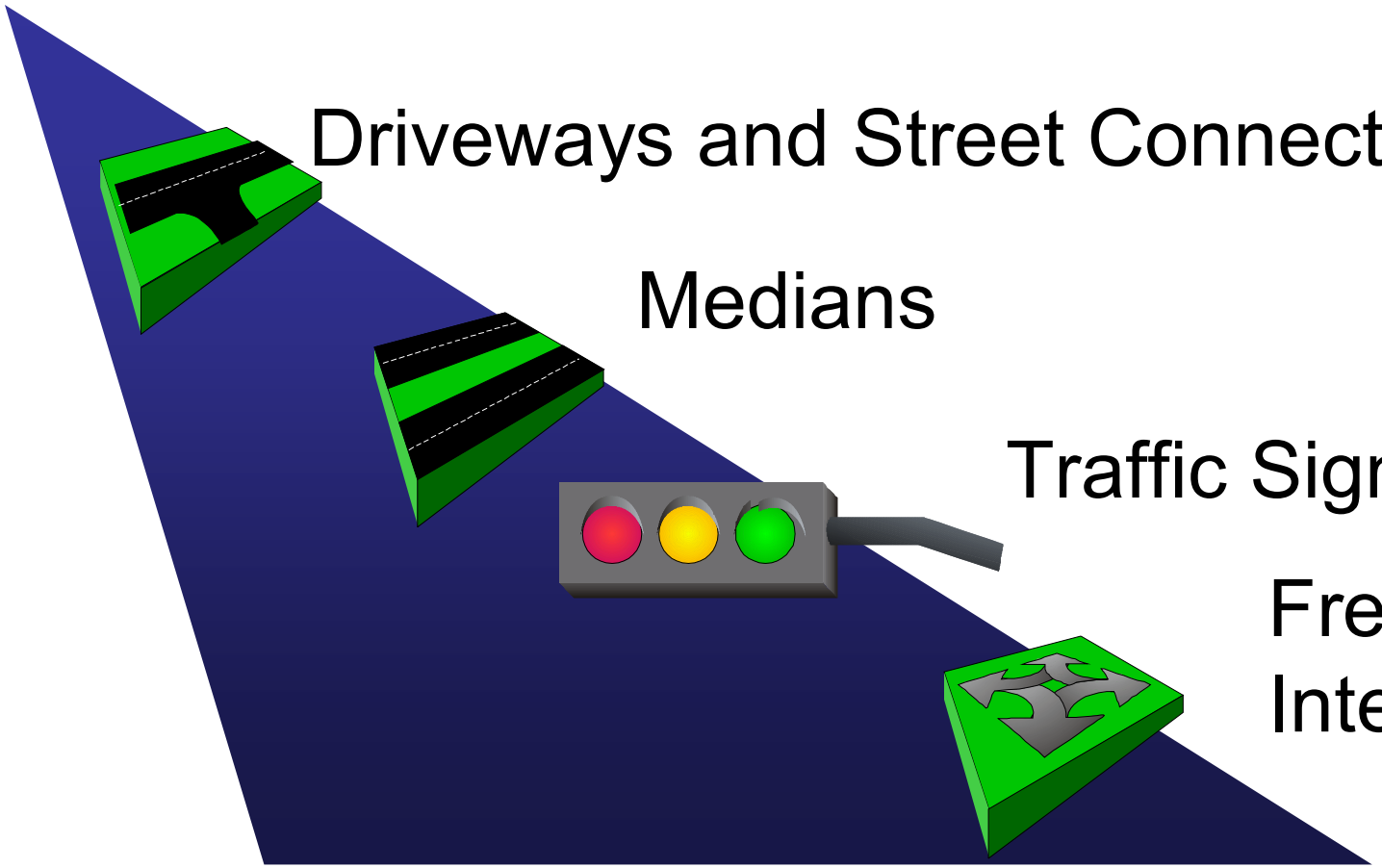
Thoroughfare Planning and Access Management





Driveways and Street Connections

Medians

Traffic Signals

Freeway Interchanges

Access Management

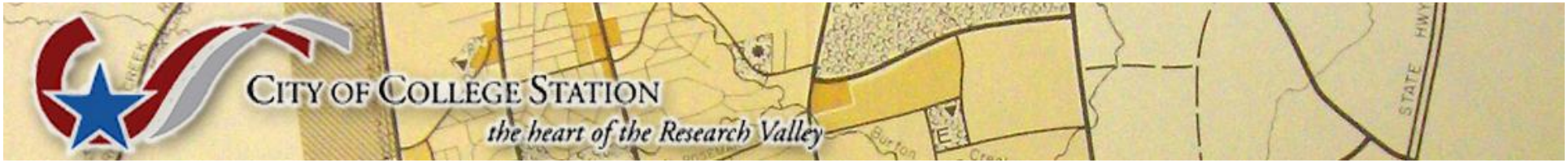
- Classifying roadways into a logical hierarchy according to function,
- Planning, designing, and maintaining roadway systems based on functional classification and road geometry,
- Defining acceptable levels of access for each class of roadway to preserve its function, including criteria for the spacing of signalized and unsignalized access points,
- Applying appropriate geometric design criteria and traffic engineering analysis to each allowable access point, and
- Establishing policies, regulations, and permitting procedures to carry out and support the program.

Workshop 2– Define Thoroughfare Network Alternatives

- Current Thoroughfare Plan
- _____
- _____

How Do We Test Alternatives?

- Calibrate a Base Model (2007)
  - Current Traffic Counts and Other Studies
- Travel Demand Model inputs
  - Population and Employment
  - Roadways current and future
- Travel Demand Model Outputs
  - Traffic Volumes
  - Delay and Congestion
- Evaluate Each Alternative
  - Tie back to Goals



Workshop 2 – Define Thoroughfare Network Alternatives

- Mark on aerial where the Thoroughfare Plan needs to be improved
- Indicate additional roads that should be considered
- Highlight areas that are your biggest concern
- Share your group's concepts

What's Next

- Public Meeting on March 5th ,Maybe the 12th?
- Incorporate your concepts into two network alternatives
- Model and evaluate each alternative
- Meet again to discuss results in late March